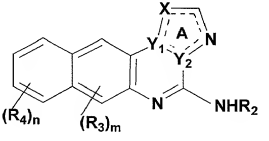
CLAIMS

We claim:

1. A compound of the formula:



(I), °

or a pharmaceutically-acceptable salt thereof, wherein

X is NR_1, CR_1, or S;

Y_1 and Y_2 are nitrogen or carbon, provided that

a) when X is CR_1, at least one of Y_1 and Y_2 is nitrogen, and b) when one of Y_1 and Y_2 is carbon, the other of Y_1 and Y_2 is nitrogen and/or X is NR_1 or S, so that ring A defines a five-membered heteroaryl ring having at least two heteroatoms;

R_1 is hydrogen, halogen, alkyl, substituted alkyl, cyano, OR_5, NR_5R_6, $C(=O)R_5$, CO_2R_5, or aryl;

R_2 is alkyl, substituted alkyl, alkenyl, alkynyl, alkoxy, alkylthio, aryl, heteroaryl, heterocyclo, cycloalkyl, or substituted cycloalkyl;

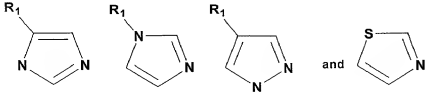
R_3 and R_4 are independently selected from halogen, alkyl, substituted alkyl, nitro, cyano, OR_7, NR_7R_8, $C(=O)R_7$, CO_2R_7, SR_7, $C(=O)NR_7R_8$, $NR_7C(=O)R_8$, $NR_7C(=O)OR_8$, $S(O)_qR_7$, $NR_7SO_2R_8$, and $SO_2NR_7R_8$;

R_5, R_6, R_7, and R_8 are independently selected from hydrogen, alkyl, substituted alkyl, and phenyl, or when attached to the same nitrogen atom (as in NR_5R_6 or NR_7R_8) may join together to form a heterocycle or heteroaryl; and

m, *n* and *q* are independently 0, 1, or 2.

2. The compound of claim 1, or a pharmaceutically-acceptable salt thereof, in which X is NR_1 or CR_1, and R_1 is hydrogen, lower alkyl, or trifluoromethyl.

3. The compound of claim 1, or a pharmaceutically-acceptable salt thereof, in which X, Y_1 and Y_2 are selected so that ring A defines one of:



4. The compound of claim 1 or a pharmaceutically-acceptable salt thereof, in which:

R_2 is C_{1-4}alkyl optionally substituted with OR_9 or $NR_{10}R_{11}$;

R_9 is hydrogen or lower alkyl; and

R_{10} and R_{11} are (i) independently selected from hydrogen, C_{1-4}alkyl, C_{1-4}substituted alkyl, and $-(C=O)C_{1-2}$alkyl, or alternatively (ii) together form a five to six membered heterocycle or heteroaryl.

5. The compound of claim 1, or a pharmaceutically-acceptable salt thereof, in which R_2 is C_{1-2} alkyl optionally substituted with one of:

OH, NH_2, $NH(C_{1-2}alkyl)$, $N(C_{1-2}alkyl)_2$, $NH(C_{1-2}substituted\ alkyl)$, $N(C_{1-2}substituted\ alkyl)_2$, $NH(C=O)C_{1-2}alkyl$, or piperidinyl.

6. The compound of claim 1 or a pharmaceutically-acceptable salt thereof, in which R_2 is aryl having zero to three substituents selected from halogen, lower alkyl, trifluoromethyl, alkoxy, and nitro.

7. The compound of claim 1 or a pharmaceutically-acceptable salt thereof, in which

X, Y_1 and Y_2 are selected so that ring A defines one of pyrazolyl, imidazolyl, or thiazolyl;

R_1 is hydrogen, methyl, ethyl, or trifluoromethyl; and

R_2 is C_{1-2}alkyl optionally substituted with one of OH, NH_2, $NH(C_{1-2}alkyl)$, $N(C_{1-2}alkyl)_2$, $NH(C=O)C_{1-2}alkyl$, or a five to six membered heterocycle.

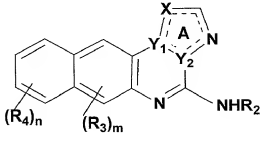
8. The compound of claim 1, or a pharmaceutically-acceptable salt thereof, in which R_3 and R_4 are selected from halogen, alkyl, substituted alkyl, nitro, cyano, OR_7, NR_7R_8, $C(=O)R_7$, CO_2R_7, SR_7, $C(=O)NR_7R_8$, $NR_7C(=O)R_8$, $NR_7C(=O)OR_8$, $S(O)_qR_7$, $NR_7SO_2R_8$, and $SO_2NR_7R_8$;

R_7 and R_8 are independently selected from hydrogen and alkyl; and

m and *n* are independently 0, 1, or 2, provided that *m* and *n* are not both 0.

9. The compound of claim 1, or a pharmaceutically-acceptable salt thereof, in which *m* and *n* are both 0.

10. A compound having the formula,



or a pharmaceutically-acceptable salt thereof, wherein

X is NR_1, CR_1, or S;

Y_1 and Y_2 are nitrogen or carbon, provided that:

a) when X is CR_1, at least one of Y_1 and Y_2 is nitrogen, and b) when one of Y_1 and Y_2 is carbon, the other of Y_1 and Y_2 is nitrogen and/or X is NR_1 or S, so that ring A defines a five-membered heteroaryl ring having at least two heteroatoms;

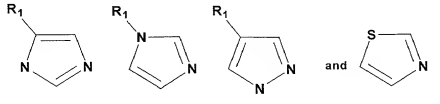
R_1 is hydrogen, halogen, lower alkyl, or trifluoromethyl;

R_2 is C_{1-4} alkyl optionally substituted with a group selected from hydroxy, alkoxy, NH_2, NH(alkyl), $N(alkyl)_2$, NH(substituted alkyl), $N(substituted\ alkyl)_2$, and NH(C=O)alkyl, and heterocycle;

R_3 and R_4 are independently halogen, lower alkyl, substituted lower alkyl, nitro, cyano, alkoxy, amino, $-CO_2H$, -C(=O)H, or alkylthio; and

m and *n* are independently 0, 1, or 2.

11. The compound of claim 10, or a pharmaceutically-acceptable salt thereof, in which X, Y_1 and Y_2 are selected so that ring A defines one of:



12. The compound of claim 11, or a pharmaceutically-acceptable salt thereof, in which:

R_2 is $C_{1\text{-}2}$ alkyl optionally substituted with a group selected from OH, NH_2, $NH(C_{1\text{-}2}alkyl)$, $N(C_{1\text{-}2}alkyl)_2$, $NH(C_{1\text{-}2}substituted\ alkyl)$, $N(C_{1\text{-}2}substituted\ alkyl)_2$, and piperidinyl.

13. The compound of claim 1, selected from (i)
benzo[g]-4-(2-N-methylaminoethylamino)-1-methylimidazo[1,2-a]quinoxaline;
benzo[g]-4-methylamino-1-methylimidazo[1,2-a]quinoxaline;
benzo[g]-4-(2-N-methylaminoethylamino)-1-methylpyrazolo[1,2-a]quinazoline;
benzo[g]-4-methylamino-1-methylpyrazolo[1,2-a]quinozoaline;
1-methyl-4-methylaminobenzo(g)-imidazo(4,5-c)quinoline;
1-methyl-4-(2-N-methylaminoethylamino)benzo(g)imidazo(4,5-c)quinoline,
1-methyl-4-methylaminobenzo(g)-thiazolo(4,5-c)quinoline;
1-methyl-4-(2-N-methylaminoethylamino)benzo(g)thiazolo(4,5-c)quinoline;
1-Methyl-4-(2-hydroxyethylamino)benzo[g]imidazo[1,2-a]quinoxaline,
1-Methyl-4-(2-piperidin-1-yl-ethylamino)benzo[g]imidazo[1,2-a]quinoxaline; and
(ii) a pharmaceutically-acceptable salt thereof.

14. A pharmaceutical composition comprising (a) at least one compound according to claim 1, or a pharmaceutically acceptable salt thereof, and (b) a pharmaceutically acceptable carrier or diluent.

15. A pharmaceutical composition comprising (a) at least one compound according to claim 10, or a pharmaceutically acceptable salt thereof, and (b) a pharmaceutically acceptable carrier or diluent.

16. A method of treating an inflammatory or immune disease or disorder comprising administering to a mammal in need thereof a therapeutically-effective amount of at least one compound according to claim 1.

17. A method of treating an inflammatory or immune disease or disorder comprising administering to a mammal in need thereof a therapeutically-effective amount of at least one compound according to claim 10.

18. The method of claim 16 in which the inflammatory or immune disease is selected from rheumatoid arthritis, asthma, inflammatory bowel disease, chronic obstructive pulmonary disease, and psoriasis.

19. The method of claim 16 in which the inflammatory or immune disease is HIV, HSV-1, breast cancer, prostate cancer, or Hodgkin's lymphoma.